Tree Protection Conditions

1. TREE FENCING. Protective tree fencing shall be placed at the drip line of existing trees prior to issuance of demolition and building permits and shall remain through all phases of construction. Include a tree protection fencing plan with the construction plans. Tree fencing should be established at least 24 inches from existing hardscape, and placed no farther than 60 inches from the existing structure. The fencing should consist of five-to six foot high chain link mounted on eight foot tall, two-inch diameter galvanized steel posts that are driven into the ground 24 inches deep and spaces apart no more than approximately ten feet. It must remain intact and maintained throughout construction, and only removed upon completion of construction and final inspection.
   a. Pursuant to Section 29.10.1005(a)(4) of the Town Code, 8.5-by 11-inch warning signs shall be affixed and proximately displayed on each side of the fencing opposite the trees' trunks: "WARNING- Tree Protection Zone- this fence shall not be removed and is subject to penalty according to Town Code 29.10.1025." These signs should be intact prior to commencing demolition.
2. The posts should be planned at least 10 feet from the trunk, minimized in diameter and spaced as far apart as possible (e.g. at least five plus feet apart). The design should specify that the post holes are manually dug using a post hole digger or shovel, and roots two inches and greater in diameter retained and protected through the process (in the event a root of this size is encountered during digging, the hole should be shifted over 12 inches and the process repeated).
3. All utilities and services (e.g. storm drain, area drain, joint trenches, electrical, water, sewer, fiber optic, gas, etc) should be routed beyond the tree protection zone (TPZ). In the event this is not feasible, the location and proximity to the tree's trunk would dictate which of the following methods can offer sufficient mitigation: hand-digging, a pneumatic air device or directional boring. For directional boring, the ground above any tunnel must remain undistributed, and access pits and any infrastructure (e.g. splice boxes, meters and vaults) established beyond the TPZ.
4. Any future pathway or other landscape features established within a TPZ should be a raised or no-dig design, with a vertical soil cute of no more than 2 to 3 inches (including for base material, edging and forms); or where there are large surface roots (e.g. greater or equal to 2 inches in diameter), then on top of (i.e. raised above) the roots. Additionally, compaction of the soil surface or subgrade must be avoided (foot tamping is acceptable), and soil fill used to bevel the top of walk or drive to existing grade should be confined to 24 inches beyond the edge, and be at least 24 inches from the tree's trunk.
5. Where beneath a tree's canopy, over excavation, compaction, grading, trenching, and other soil disturbance beyond any approved curb, gutter, pavement, wall, building foundation or driveway should be confined to 12 inches.
6. Staging areas and routes of access should be planned beyond tree canopies.
7. Preventative measures shall be implemented to avoid soil eroding or being spread/placed downhill beneath a tree's canopy.
8. Spoils created during digging should not be piled or spread on unpaved ground within the TPZ, rather they should be temporarily piled on plywood or a tarp.

9. The limits of grading should be staked upon completion of demolition and prior to any soil cut, fill or compaction (the protection fencing may also need to be modified at this stage to protect tree roots).
10. Great care must be taken during demolition of existing hardscape, curb/gutters, staircases, walkways, walls, sheds, foundations, fences, planter boarders, mowbands, etc. within a TPZ to avoid excavating into roots and existing grade. Also, equipment used during the process must not operate or travel on a newly exposed soil surface.
11. Tree trunks must not be used as winch supports for moving or lifting heavy loads.
12. Fill and debris covering root collars should be cleared to minimize the risk of harmful organisms rotting healthy tissue. This work involves manually clearing soil to expose the root collar, work that must be carefully performed to avoid damaging the trunk and roots during the process.
13. Dust accumulating on trunks and canopies during dry weather periods should be periodically washed away (e.g. every month or two).
14. The disposal of harmful products (such as cement, paint, chemicals, oil and gasoline) is prohibited beneath canopies or anywhere on site that allows drainage beneath or near TPZs. Herbicides should not be used with a TPZ; where used on site, they should be labeled for safe use near trees.
15. The landscape design should conform to the following additional guidelines:
    a. Plant material installed beneath the canopies of oaks must be drought-tolerant, limited in amount, and planted at least five or more feet from their trunks. Plant material installed beneath the canopies of all other trees should be at least 24 to 36 inches from their trunk.
    b. Irrigation can, overtime, adversely impact the oaks and should be avoided. Irrigation for any new plant material beneath an oak's canopy should be low volume, applied irregularly (such as only once or twice per week), and temporary (such as no more than three years).
    c. Irrigation should not be applies within five feet from the oak trunks, or within six inches from the trunks of all other trees (existing and proposed).
    d. Irrigation and lighting features (e.g. main line, lateral lines, valve boxes, wiring and controllers) should be established so that no trenching occurs within a TPZ. In the event this is not feasible, they may require being installed in a radial direction to a tree's trunk, and terminate a specific distance from a trunk (versus crossing past it). Should this not be possible, the work may need to be performed using a pneumatic air device to avoid root damage.
    e. Ground cover beneath canopies should be compromised of a three- to four-inch layer of coarse wood chips or other high-quality mulch (gorilla hair, bark or rock, stone, gravel, black plastic or other synthetic ground cover should be avoided). Mulch should not be placed against the tree trunk.